

**SUMMARY OF HYDROLOGIC CONDITIONS  
IN THE  
UPPER DELAWARE RIVER BASIN  
April 2002**

Prepared by the  
Office of the Delaware River Master  
Milford, Pennsylvania

Adjusted streamflow in the upper Delaware River Basin during April was deficient. The maximum daily mean discharge of 14,200 cfs occurred on April 30. The minimum daily mean discharge was 2,820 cfs on April 14.

On the basis of a 5-station average, precipitation during April was 3.71 inches, which is 99 percent of the 61-year average. The maximum daily-average precipitation during April was 0.85 inches on April 29. Precipitation in the upper Delaware River Basin during the past 12 months was 9.67 inches less than the long-term average. Precipitation during April was 0.02 inches less than the long-term average for the month.

The observed monthly mean streamflow of the Delaware River at Montague, N.J. during April was 5,310 cfs, which is 46 percent of median. The flow at Montague, adjusted for diversions from the basin and change in storage in the major reservoirs was 7,914 cfs, or 57 percent of median (water years 1961-90).

Combined storage May 1, 2002 in Pepacton, Cannonsville, and Neversink Reservoirs was 63 percent of capacity above the point of maximum depletion. The combined storage of 169 billion gallons was 34 billion gallons more than that of one month ago and 101 billion gallons less than that of one year ago. Median storage on the first day of May in 34 years of record is 271 billion gallons. On the basis of reservoir storage, the river basin entered drought on December 1, 2001.

As part of a statewide network, the USGS operates 12 observation wells in the Pennsylvania part of the Delaware River Basin. Mean water levels during April were below average in all 12 of the wells. Water levels in 11 of the wells were trending upward in comparison to March levels, and water levels in all 12 of the wells were below April 2001 levels.

# HYDROLOGIC CONDITIONS IN THE UPPER DELAWARE RIVER BASIN

Compiled by the Office of the Delaware River Master, Milford, Pa.

(Preliminary data - subject to revision)

## PRECIPITATION, IN INCHES

|       | Dec. 1940 to Apr. 2001 |            | May 2001 to April 2002 |            |                    |            |                           |            |
|-------|------------------------|------------|------------------------|------------|--------------------|------------|---------------------------|------------|
|       | Average                |            | Actual                 |            | Percent of average |            | Excess (+) or deficit (-) |            |
|       | Amount                 | Cumulative | Amount                 | Cumulative | By month           | Cumulative | By month                  | Cumulative |
| May   | 4.21                   | 43.24      | 3.08                   | 33.57      | 73                 | 78         | -1.13                     | -9.67      |
| June  | 3.96                   | 39.03      | 4.06                   | 30.49      | 103                | 78         | +1.10                     | -8.54      |
| July  | 4.09                   | 35.07      | 2.49                   | 26.43      | 61                 | 75         | -1.60                     | -8.64      |
| Aug.  | 3.85                   | 30.98      | 2.84                   | 23.94      | 74                 | 77         | -1.01                     | -7.04      |
| Sept. | 3.83                   | 27.13      | 5.37                   | 21.10      | 140                | 78         | +1.54                     | -6.03      |
| Oct.  | 3.38                   | 23.30      | 1.28                   | 15.73      | 38                 | 68         | -2.10                     | -7.57      |
| Nov.  | 3.83                   | 19.92      | 1.37                   | 14.45      | 36                 | 73         | -2.46                     | -5.47      |
| Dec.  | 3.36                   | 16.09      | *2.80                  | 13.08      | 83                 | 81         | -.56                      | -3.01      |
| Jan.  | 3.00                   | 12.73      | 1.69                   | 10.28      | 56                 | 81         | -1.31                     | -2.45      |
| Feb.  | 2.65                   | 9.73       | 1.41                   | 8.59       | 53                 | 88         | -1.24                     | -1.14      |
| Mar.  | 3.35                   | 7.08       | 3.47                   | 7.18       | 104                | 101        | +1.12                     | +1.10      |
| Apr.  | 3.73                   | 3.73       | 3.71                   | 3.71       | 99                 | 99         | -.02                      | -.02       |

Note: Amount shown in cumulative columns is total from month shown to present.

\* Revised since last month.

## STREAMFLOW, IN CFS DELAWARE RIVER AT MONTAGUE, N.J.

| Month            | 1940-2000     |        |              | 2002<br>Monthly mean | Percent of<br>median |
|------------------|---------------|--------|--------------|----------------------|----------------------|
|                  | Maximum       | Median | Minimum      |                      |                      |
| April (observed) | 31,560 (1940) | 11,640 | 3,322 (1985) | 5,310                | 46                   |
| April (adjusted) | 33,010 (1940) | 13,840 | 3,847 (1946) | 7,914                | 57                   |
| May (observed)   | 16,090 (1943) | 7,019  | 2,215 (1965) |                      |                      |
| May (adjusted)   | 18,970 (1989) | 8,256  | 2,944 (1941) |                      |                      |